

REMARKS

In the Office Action dated March 3 2004, claims 8 and 31 were objected to due to informalities; claims 1-3, 6-8, 11-15, 18, 19, 21-23, 27, 28, 30, and 31 were rejected under 35 U.S.C § 102 over U.S. Patent No. 6,473,798 (Grosser); claims 4, 5, 16, 17, and 20 were rejected under § 103 over Grosser in view of U.S. Patent No. 6,182,226 (Reid); claims 9, 10, 24, 25, and 29 were rejected under § 103 over Grosser in view of U.S. Patent No. 6,636,898 (Ludovici); and claim 26 was rejected under § 103 over Grosser in view of U.S. Patent No. 6,173,411 (Hirst).

Claims 8 and 31 have been amended to address the form of the claims. The scope of each of the claims remains unchanged.

Applicant respectfully submits that claim 1 is not disclosed by Grosser. Grosser focuses on testing a *Layer 2 tunnel* in a communications network. See Grosser 2:66-67 (“[T]he present invention provides a method and system for testing a Layer 2 tunnel.”). In contrast, claim 1 recites sending at least one ping message over a *secure link* (established according to a *security protocol*). Claim 1 further recites monitoring for at least one ping reply to determine if the *secure link* is alive. The test packet sent in a Layer 2 tunnel as performed in Grosser does not constitute sending a ping message over a *secure link* as recited in claim 1. As expressly taught by Grosser, “the three Layer 2 tunnels discussed above do not themselves specify or provide data security.” Grosser, 4:23-24. In other words, the Layer 2 tunnels described in Grosser are *not* secure links, and therefore, sending test packets in the Layer 2 tunnels to test the Layer 2 tunnels do not constitute sending a ping message over a *secure link*.

The Office Action cited column 1, lines 8-14, of Grosser as teaching the establishing of a secure link. The cited passage of Grosser describes virtual private networks (VPNs). However, note that the sending of test packets to test Layer 2 tunnels as described by Grosser is not the same as sending test packets to test the VPNs.

Moreover, as described in Grosser, to test a Layer 2 tunnel (an L2TP tunnel, an L2F tunnel, or a PPTP tunnel), an echo message according to the respective Layer 2 protocol is used (L2TP Hello, L2F_ECHO, or PPTP Echo-request). In other words, to test a tunnel (defined

according to a Layer 2 protocol), a test packet according to the *same* Layer 2 protocol is sent through the Layer 2 tunnel. Therefore, the recitation in claim 1 that the ping message is defined *outside* the security protocol cannot be satisfied by Grosser.

In view of the foregoing, claim 1 is not anticipated by Grosser. Independent claim 27 is allowable over Grosser for reasons similar to those for claim 1.

Independent claim 11 is also not anticipated by Grosser, which does not disclose sending a ping message to a remote node over a *secure link* and *through a security gateway*, and monitoring for a ping reply from the remote node to determine if the *secure link* is alive. As discussed above, the testing of Layer 2 tunnels in Grosser does not constitute sending a ping message over a secure link and monitoring for a ping reply to determine if the secure link is alive. Moreover, Grosser does not teach sending a ping message to a remote node *through* a security gateway. In Grosser, the enterprise network server (ENS) 28 sends a test packet through the Layer 2 tunnel to a host—however, there is no indication that the test packet is sent through a security gateway. The Office Action cited column 3, lines 34-39, of Grosser as teaching the second security gateway. However, this passage refers to gateway 24—there is no indication that the gateway 24 is a security gateway. Therefore, it is respectfully submitted that claim 11 is not anticipated by Grosser.

Independent claim 31 is allowable over Grosser for reasons similar to those as for claim 11.

With respect to independent claim 18, Grosser does not disclose a keep-alive module to send a ping message over a *secure link*, the ping message *defined outside* the security protocol that defines the secure link.

Dependent claims, including the newly added dependent claims, are allowable for at least the same reasons as corresponding independent claims. Dependent claims that were rejected as being obvious over combinations of Grosser and other references are allowable for at least the reason that the obviousness rejections are defective in view of the defective rejection of base claims over Grosser.

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Additionally, it is respectfully submitted that the asserted combination of Grosser and Reid does not render obvious dependent claims 4, 5, 16, 17, and 20. Each of these dependent claims recite use of an Internet Control Message Protocol (ICMP) message as the ping message. However, Applicant respectfully submits that there is absolutely no need for use of an ICMP message as a ping message in Grosser. In Grosser, a Layer 2 echo message is used to test a Layer 2 tunnel, where the Layer 2 echo message is according to the *same* protocol for the Layer 2 tunnel. Therefore, there is absolutely no need for a different type of message, such as an ICMP message, to test the Layer 2 tunnel of Grosser. Moreover, using the ICMP message to test the Layer 2 tunnel of Grosser would render the Grosser test mechanism inoperative for its intended purpose. Sending an ICMP message through a Layer 2 tunnel would *not* enable testing of the Layer 2 tunnel, since ICMP is a message defined by a higher level protocol. Therefore, there is no motivation or suggestion to combine Grosser and Reid in the manner proposed by the Office Action.

In view of the foregoing, allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (NRB.0006US).

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Respectfully submitted,



Dan C. Hu, Reg. No. 40,025
Trop, Pruner & Hu, P.C.
8554 Katy Freeway, Suite 100
Houston, TX 77024
(713) 468-8880 [Phone]
(713) 468-8883 [Fax]